

Installation Guide

hp StorageWorks Business Copy EVA/MA/EMA 2.3 Host Agent for hp OpenVMS

Product Version: 2.3

Second Edition (September 2004)

Part Number: AA-RUQPC-TE

The HP StorageWorks Business Copy (BC) for enterprise virtual array (EVA), modular array (MA), and enterprise modular array (EMA) installation guide describes procedures for installing, reinstalling, updating, and removing the BC host agent software.



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Business Copy EVA/MA/EMA 2.3 Host Agent for HP OpenVMS Installation Guide
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about this guide

This installation guide supersedes previous Business Copy (BC) host agent installation guides and provides information to help you:

- Understand BC host agent installation prerequisites
- Install BC host agent for HP OpenVMS software on a host computer in a BC network
- Reinstall BC host agent software on a host computer
- Remove BC host agent software from a host computer
- Contact technical support for additional assistance

“About this Guide” topics include:

- [Overview](#), page 6
- [Conventions](#), page 7
- [Getting help](#), page 8

Overview

This section covers the following topics:

- [Intended audience](#)
- [Prerequisites](#)

Intended audience

This guide is intended for customers and HP authorized service providers. In addition to being familiar with BC, readers should also be knowledgeable of BC-supported:

- SAN fabric configurations
- Host operating system environments
- Storage systems
- Multibus configurations

Prerequisites

Before installing BC host agent software, consider the following items:

- Has the BC server software been installed on a BC server platform?
If not, install the BC server software before continuing. Refer to the *HP StorageWorks Business Copy EVA/MA/EMA v2.3 Getting Started Guide*¹ (AA–RVHPA–TE) for prerequisite information and the *HP StorageWorks Business Copy EVA/MA/EMA 2.3 Server Installation Guide* (T3032–96202) for the installation procedure.
- Does the host computer on which the BC host agent software is being installed have visibility to a BC server platform in the same SAN environment? If not, refer to the *HP StorageWorks Business Copy EVA/MA/EMA 2.3 Network Administration Guide*² (T3032–96301).

1. Hereafter referred to as BC Getting Started Guide.
2. Hereafter referred to as BC Network Administration Guide.

Conventions

Conventions consist of the following:

- Document conventions
- Text symbols

Document conventions

This document follows the conventions in [Table 1](#).

Table 1: Document conventions

Convention	Element
Blue text: Figure 1	Cross-reference links
Bold	Menu items, buttons, and key, tab, and box names
<i>Italics</i>	Text emphasis and document titles in body text
Monospace font	User input, commands, code, file and directory names, and system responses (output and messages)
<i>Monospace, italic font</i>	Command-line and code variables
Blue underlined sans serif font text (http://www.hp.com)	Web site addresses

Text symbols

The following symbols may be found in the text of this guide. They have the following meanings:



WARNING: Text set off in this manner indicates that failure to follow directions in the warning could result in bodily harm or death.



Caution: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or data.

Tip: Text in a tip provides additional help to readers by providing nonessential or optional techniques, procedures, or shortcuts.

Note: Text set off in this manner presents commentary, sidelights, or interesting points of information.

Getting help

If you still have a question after reading this guide, contact an HP authorized service provider or access our web site: <http://www.hp.com>.

HP technical support

Telephone numbers for worldwide technical support are listed on the following HP web site: <http://www.hp.com/support/>. From this web site, select the country of origin.

Note: For continuous quality improvement, calls may be recorded or monitored.

Be sure to have the following information available before calling:

- Technical support registration number (if applicable)
- Product serial numbers
- Product model names and numbers
- Applicable error messages
- Operating system type and revision level
- Detailed, specific questions

HP storage web site

The HP web site has the latest information on this product, as well as the latest drivers. Access storage at: <http://www.hp.com/country/us/eng/prodserv/storage.html>. From this web site, select the appropriate product or solution.

HP authorized reseller

For the name of your nearest HP authorized reseller:

- In the United States, call 1-800-345-1518
- In Canada, call 1-800-263-5868
- Elsewhere, see the HP web site for locations and telephone numbers: <http://www.hp.com>.

Installation Preparation

1

This chapter provides preparation information for installing or updating BC host agent software. Refer to the BC Getting Started Guide for prerequisite information before installing BC.

Complete the applicable section before beginning a BC host agent software installation or update.

- [New installation preparation](#), page 10
- [Update installation preparation](#), page 12



Caution: Do not install the BC host agent before reviewing the BC server platform configuration. Installing BC in an unsupported configuration may cause the BC network to function improperly. For procedures on planning and verifying BC supported configurations, refer to the BC Network Administration Guide.

New installation preparation

Complete the following procedures before installing BC:

- [Coordinating Business Copy installation activities](#)
- [Verifying the Business Copy server configuration](#)
- [Verifying the host configuration](#)

Coordinating Business Copy installation activities

Before installing BC, ensure that:

- The BC host agent installation activities have been coordinated with users of the host; coordinating with other users prevents a disruption in host activities
- The BC host agent version being installed is compatible with the BC server for this BC network
- The BC server that supports the BC host agent installation is installed or updated before installing the BC host agent
- The BC server is running while installing the BC host agent

Note: HP strongly recommends that the BC server be running to allow the BC host agent installation software to establish communication with the BC server. If necessary, the BC host agent can be installed without the BC server running.

Verifying the Business Copy server configuration

Before installing the BC host agent, verify that the BC server:

- Has a version level that supports this host agent
- Remains running during the host agent update

Also, record the following BC server platform information for the BC host agent installation:

- Fully qualified network name (such as MyComputer.dept.corp)
- Unqualified network name (such as MyComputer)
- IP address (such as 11.22.33.44)

Make this information available during the BC host agent installation.

To view the network name and IP address of a BC server platform, browse to the BC server platform and log in. Both items are shown at the top of the home page.

When ready, go to the next section.

Verifying the host configuration

Before installing the BC host agent, verify that the host has BC-supported configurations and versions of the following:

- Host operating system version
- StorageWorks Solution Software kit
- FC HBAs and drivers

- Multibus failover configuration with the storage controllers
- TCP/IP v5.1 or greater
- Bind resolver

This BC host agent is cluster-aware and supports only OpenVMS systems.

Refer to the BC Network Administration Guide and *HP StorageWorks Business Copy EVA/MA/EMA 2.3 Host Agent for HP OpenVMS Release Notes*¹ (T3032-98207) for specific requirements.

When ready, go to “[Installing the Business Copy Host Agent](#)” on page 15 to start the installation.

1. Hereafter referred to as BC Host Agent Release Notes.

Update installation preparation

Complete the following procedures before updating to BC v2.3.

- [Downloading the update](#)
- [Backing up the update](#)
- [Coordinating Business Copy update activities](#)
- [Verifying the Business Copy server configuration](#)
- [Verifying the host configuration](#)

Downloading the update

The BC host agent update is available only by download from the Business Copy product page web site.

1. Visit <http://h18000.www1.hp.com/products/storage/software/bizcopyeva/index.html>.
2. Click **software & drivers**.
3. Under **technical support - hp StorageWorks business copy eva**, click the **download software and drivers** link.
4. Under **download software & drivers - specify product name**, click the **business copy upgrade ui eva v2.3 med/doc kit** to access the update download page.
5. Save the update to the host computer.

When ready, go to the next section.

Backing up the update

After downloading the update file, HP recommends backing up the update file and the files extracted from the web site to CD-ROMs that you can keep in one or more locations. This ensures that BC installations and updates can be performed quickly in the future without downloading files again.

HP recommends making the following CD-ROMs.

- One for archival purposes
- One to keep with the BC server platform containing the BC server software
- One or more to retain with BC hosts

To make a CD-ROM backup:

1. Extract the individual files from the download file (BC_2.3_Update.exe).
Do not extract deeper than the first level.
2. Burn a CD-ROM copy of the download file and extracted files.
3. Label each CD-ROM with the month and year. For example:
"Business Copy v2.3—September 2004 Update."

When ready, go to the next section.

Coordinating Business Copy update activities

Before installing BC, ensure that:

- The BC host agent update activities have been coordinated with users of the host; coordinating with other users prevents a disruption in host activities
- The BC host agent version being updated is compatible with the BC server for this BC network
- No BC jobs involving the host are running or “undoing” or are scheduled to run or “undo” during the update installation period
- The BC server that supports the BC host agent installation is installed or updated before updating the BC host agent
- The BC server is running while updating the BC host agent

Note: HP strongly recommends that the BC server be running to allow the BC host agent installation software to establish communication with the BC server. If necessary, the BC host agent can be installed without the BC server running.

When ready, go to the next section.

Verifying the Business Copy server configuration

Before updating the BC host agent, verify that the BC server:

- Has a version level that supports this host agent
- Remains running during the host agent update

Also, record the following BC server platform information for the BC host agent installation:

- Fully qualified network name (such as MyComputer.dept.corp)
- Unqualified network name (such as MyComputer)
- IP address (such as 11.22.33.44)

Make sure to have this information available during the BC host agent installation.

To view the network name and IP address of a BC server platform, browse to the BC server platform and log in. Both items are shown at the top of the home page.

When ready, go to the next section.

Verifying the host configuration

Before updating the BC host agent, verify that the host has BC-supported configurations and versions of the following:

- Host operating system version
- StorageWorks Solution Software kit
- FC HBAs and drivers
- Multibus failover configuration with the storage controllers
- TCP/IP v5.1 or greater
- Bind resolver

This BC host agent is cluster-aware and supports only OpenVMS systems.

Refer to the BC Network Administration Guide and BC Host Agent Release Notes for specific requirements.

When ready, go to “[Installing the Business Copy Host Agent](#)” on page 15 to start the update.

Installing the Business Copy Host Agent

2

This module assumes that “[Installation Preparation](#)” on page 9 has been read and all appropriate steps have been successfully completed. Complete the following procedures, in sequence, to install a BC host agent:

1. [Preparing for installation](#), page 16
2. [Starting the installation](#), page 18
3. [Completing the installation](#), page 29

Preparing for installation

Complete the following procedures before starting the BC host agent installation.

- Use one of the following methods to prepare for installing the BC host agent software:
 - [CD-ROM method](#)
 - [Web download method](#)
- [Determine which node functions as the cluster impersonator](#)

Note: To install BC successfully, the host computer must have at least 8,416 blocks of free disk space.

CD-ROM method

1. Locate the BC host agent CD-ROM.
2. On the host computer, open a terminal window and log on as a system user.
3. Insert the CD-ROM into the CD-ROM drive.
4. Navigate to the OpenVMS folder on the CD-ROM.
5. Create a temporary folder in preparation for extracting the BC host agent software, as the following example illustrates:

```
$ create/dir sys$sysdevice:[temp]
$ set default sys$sysdevice:[temp]
```

6. Copy the file into the temporary folder.
7. Run the `bc23ovms.exe` file to extract the installation files.

When ready, go to [“Supported OpenVMS configurations”](#) on page 17.

Web download method

1. On the host computer, open a terminal window and log on as a system user.
2. Locate either the CD-ROM made from the BC update download (see [“Update installation preparation”](#) on page 12) or the OpenVMS download file (`bc23ovms.exe`) on the host computer or LAN.
3. Create a temporary folder in preparation for extracting the BC host agent software, as the following example illustrates:

```
$ create/dir sys$sysdevice:[temp]
$ set default sys$sysdevice:[temp]
```

4. Copy the download file into the temporary folder.
5. Run the `bc23ovms.exe` file to extract the installation files.

When ready, go to the next section.

Supported OpenVMS configurations

Table 2 describes the supported OpenVMS configurations for installing BC host agent software. When ready, go [“Starting the installation”](#) on page 18.

Table 2: Supported OpenVMS configurations

OpenVMS OS version	TCP/IP version	Standalone configuration	Cluster configuration	Install BC using...
7.3.1	5.1 to 5.3	X		“Standalone host installations” on page 18
			X	“Cluster installations” on page 22
7.3.2	5.4	X		“Standalone host installations” on page 18
			X	“Cluster installations” on page 22

Starting the installation

Select the appropriate installation for the current host configuration:

- [Standalone host installations](#), page 18
- [Cluster installations](#), page 22

Standalone host installations

Complete the following procedure to install the BC host agent software.

Note: During the installation procedure, press **Return** to choose the default response. Also press **Return** as necessary to scroll through lengthy text screens.

1. Enter `product install bc` to start the installation script.
The script starts the BC host agent installation.

Note: If a previous BC host agent installation currently resides on the host computer, `[Installed]` displays beside the Layered Product text.

```
The following product has been selected:
      HP AXPVMS BC v2.3                Layered Product

Do you want to continue? (Yes/No) [YES] :

Configuration phase starting...

You will be asked to choose options, if any, for each selected product and for any
products that may be installed to satisfy software dependency requirements.

HP AXPVMS BC v2.3: HA-OVMS v2.3 for HP Alpha OpenVMS

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uses license pak
```

Figure 1: Installation confirmation

2. Press **Return** or enter `yes` to continue; enter `no` to exit the installation script.

```

=====
Business Copy EVA/MA/EMA Host Agent v2.3
=====

=====
Introduction
=====

This script guides you through the installation of Business Copy (BC).
.
.
.

=====
BC License Agreement
=====

Installation and use of Business Copy requires acceptance of the following License
Agreement:

Business Copy EVA & MA/EMA License Agreement

Attention Notice

IMPORTANT: READ CAREFULLY BEFORE USING THIS PRODUCT.
.
.
.

DO YOU ACCEPT THE TERMS OF THIS LICENSE AGREEMENT? (Yes/No) [YES]:

```

Figure 2: BC Introduction and License Agreement

3. Review the BC introduction and license agreement.
4. Press **Return** or enter `yes` to agree to these terms and continue the installation; enter `no` to exit the installation script.

```

=====
BC Prerequisites
=====

Welcome to the HP StorageWorks Business Copy EVA/MA/EMA Host Agent installation script.
This script will install BC on this computer.

Do not proceed until you have:
.
.
.

```

Figure 3: BC Prerequisites



Caution: Failure to properly address BC preinstallation requirements and compatibility considerations can lead to reduced operational capability and failure of BC jobs.

5. Carefully review the BC prerequisites and make sure each item has been addressed before continuing the BC host agent installation.

Note: If any of the operational considerations have not been addressed, exit the installation, address the items, then restart the installation.

6. If all BC prerequisites have been addressed, determine the installation folder for the BC host agent software.

Installation folder considerations:

- For initial installations, choose the BC default folder or an empty host folder.
- For reinstallations, the default installation folder is `sys$sysdevice$DKCO:[SYS0.SYSCOMMOM.]`.

Note: During a reinstallation, BC overwrites the `OSVM.ini` and `SB.ini` files for the previous BC installation. To prevent losing any customized `OSVM.ini` or `SB.ini` attribute settings, HP recommends saving these files to an alternate location before reinstalling the BC software. Then, following the BC reinstallation, use these saved files to reapply the customized attribute settings to the new files, if desired.

```
=====
Choose the Installation Folder
-----

Where would you like to install Business Copy?

Default installation directory: <Node_name>$<Device_name>: [SYS0.SYSCOMMON.]

To install BC to a different directory, exit this installation and define the
pcsi$destination logical. For example, to install in dka0:[test] use: $define/system
pcsi$destination dka0:[test].

Do you want to exit this installation to change the installation path? (Yes/No) [NO] :
Do you want to start the SWITCHBOARD service immediately after installation? (Yes/No)
[YES] :
```

Figure 4: Installation folder option

7. Press **Return** to continue using the BC default installation folder or enter `yes` to exit the installation in order to change the installation path.
 8. Press **Return** to automatically start the switchboard immediately after the installation.
- After the switchboard status is determined, the BC host agent software installation begins. Initially, a progress bar is displayed, followed by an BC server platform name question.

```
=====
BC Server Platform Name
-----

NOTE: If the installation script cannot detect the entered BC server platform name or IP
address after three attempts, the installation script automatically accepts the third
entry and saves this name or IP address in the sb.ini file.

Enter the BC server platform fully qualified name, qualified name, or IP address:
```

Figure 5: BC server platform name option

9. Enter the fully qualified name, qualified name, or IP address of the BC server platform that supports this BC host agent.

Note: The BC server platform name or IP address is required to establish network communication between BC host agents and the BC server.

Note: HP recommends using the fully qualified name when entering BC server platform name information.

After entering the BC server platform name or IP address, a check is performed to verify communication. This check allows an incorrect BC server platform name to be corrected and also provides the opportunity to continue the BC host agent installation in the event that the LAN is down or the BC server platform is offline.

- If this check fails, [Figure 6](#) displays. Press **Return** to confirm the BC server platform name or IP address and continue; enter `no` to exit the installation.

```
=====
Unable to Ping Host
-----

NOTE: If a DNS Entry does not exist for this BC server platform, add the BC server
platform to the local TCP/IP hosts database:
$TCPIP SET HOST Server Name/Address=IP-Address/Alias=Server Alias

Do you want to continue? (Yes/No) [NO] :
```

Figure 6: Unable to Ping Host

- If this check succeeds, [Figure 7](#) displays. Continue with the next step.

```
=====
Pre-Installation Summary
-----

Please Review the Following Before Continuing:

Product Name:
  Business Copy EVA/MA/EMA Host Agent v2.3

Install Folder:
  <BC_default_or_previous_folder>

BC server platform:
  <BC_server_platform_name/IP>

Disk Space Information (for Installation Target):
  Required: 8416 blocks
  Available: 12340 blocks

Press return to continue:
```

Figure 7: Pre-Installation Summary

10. Press **Return** to continue; enter `quit` to exit the installation.

```
=====
Installing...
-----

WARNING: Do not terminate the installation in progress. Terminating the process may cause
an incomplete set of BC files and directories to remain on the system. During an abnormal
termination, it may not be possible to completely clean the system for BC files.

*This product does not have any configuration options.

Execution phase starting
.
.
.
```

Figure 8: Installation process and BC feedback email address

```
=====
Please consult the Business Copy Host Agent Release Notes before using Business Copy.
To submit comments regarding BC, send an email to BCFeedback@hp.com.
=====
```

```
...100%
```

```
The following product has been installed:
```

```
HP AXPVMS BC v2.3                Layered Product
```

Figure 9: BC feedback email address

The BC host agent software is installed. This new BC-enabled host can now communicate with the BC server and participate in BC jobs. Refer to the BC Host Agent Release Notes before using BC.

Cluster installations

To install BC host agent software on a cluster, the following tasks are expected:

1. [Define the cluster impersonator/name](#)
2. [Determine which node functions as the cluster impersonator](#)
3. [Installing the BC host agent software](#)

Note: If the cluster impersonator or cluster name was previously defined, then proceed directly to the installation procedure.

Define the cluster impersonator/name

The cluster impersonator (TCP/IP v5.1 to v5.3) or cluster name (TCP/IP v5.4) must be defined before installing BC host agent software for all cluster configurations.

Define the cluster impersonator/name on every node, if not previously defined, using the following procedure as a starting point:

1. Enter @sys\$sysroot:[symgr]tcpip\$config.com.

TCP/IP Network Configuration Procedure

This procedure helps you define the parameters required to run HP TCP/IP Services for OpenVMS on this system.

Checking TCP/IP Services for OpenVMS configuration database files.

HP TCP/IP Services for OpenVMS Configuration Menu

Configuration options:

```
.
.
.
```

Enter configuration option:

Figure 10: TCP/IP Network Configuration Procedure

2. Enter 1 (Core environment).

```

HP TCP/IP Services for OpenVMS Core Environment Configuration Menu
Configuration options:
.
.
.
Enter configuration option:

```

Figure 11: Core Environment Configuration Menu

3. Enter 2 (Interfaces).

```

INTERFACE Configuration
The Ethernet device(s) on your system are:
.
.
.
HP TCP/IP Services for OpenVMS Interface IE0 Reconfiguration Menu
Reconfiguration options:
.
.
.
Enter configuration option:

```

Figure 12: Interface Configuration

4. Enter 1 (Configure interface manually).
5. Enter a fully qualified host name or IP address.

From this point, define the cluster impersonator on every node in the cluster by specifying a cluster name and IP address for the cluster as prompted by the system.

When ready, go to the next section.

Determine which node functions as the cluster impersonator

After setting the cluster impersonator/name, determine which cluster node is assigned the impersonator role.

To determine which node is the cluster impersonator, use one of the following command sets:

- For clusters using TCP/IP v5.1 to v5.3:

```

$ mcr sysman
SYSMAN> set environment/cluster
SYSMAN> do ucx show interface/cluster

```

- For clusters using TCP/IP v5.4, the `show interface/cluster` command is no longer supported. Use the following procedure as a work around to identify the impersonator node:

- a. Telnet to the cluster name or IP address.
- b. Enter the system Username and Password.

At this point, you are logged into the node functioning as the cluster impersonator (failSAFE node).

- c. Enter the following command to determine the node name.

```
$ show system
```

The node name displays in the first line as shown in the example below:

```
OpenVMS V7.3-2 on node <Node_name>...
```

When ready, go to the next section.

Installing the BC host agent software

When installing BC host agent software in a cluster configuration, the node on which the installation takes place varies as follows:

- For shared system disk configurations—Install BC on the cluster impersonator node only.
- For non-shared system disk configurations—Install BC on all nodes of the cluster. *Always install BC on the cluster impersonator node last.*

Complete the following procedure to install the BC host agent software.

Note: During the installation procedure, press **Return** to choose the default response. Also press **Return** as necessary to scroll through lengthy text screens.

1. Enter `product install bc` to start the installation script.

The script starts the BC host agent installation.

Note: If a previous BC host agent installation currently resides on the host computer, [Installed] displays beside the Layered Product text.

The following product has been selected:

```
HP AXPVMS BC v2.3                Layered Product
```

Do you want to continue? (Yes/No) [YES] :

Configuration phase starting...

You will be asked to choose options, if any, for each selected product and for any products that may be installed to satisfy software dependency requirements.

HP AXPVMS BC v2.3: HA-OVMS v2.3 for HP Alpha OpenVMS

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uses license pak

Figure 13: Installation confirmation

2. Press **Return** or enter `yes` to continue; enter `no` to exit the installation script.


```

=====
Business Copy EVA/MA/EMA Host Agent v2.3
=====

Introduction
-----

This script guides you through the installation of Business Copy (BC).
.
.
.

=====
BC License Agreement
-----

Installation and use of Business Copy requires acceptance of the following License
Agreement:

Business Copy EVA & MA/EMA License Agreement

Attention Notice

IMPORTANT: READ CAREFULLY BEFORE USING THIS PRODUCT.
.
.
.

DO YOU ACCEPT THE TERMS OF THIS LICENSE AGREEMENT? (Yes/No) [YES]:

```

Figure 14: BC Introduction and License Agreement

3. Review the BC introduction and license agreement.
4. Press **Return** or enter **yes** to agree to these terms and continue the installation; enter **no** to exit the installation script.

```

=====
BC Prerequisites
-----

Welcome to the HP StorageWorks Business Copy EVA/MA/EMA Host Agent installation script.
This script will install BC on this computer.

Do not proceed until you have:
.
.
.

```

Figure 15: BC Prerequisites



Caution: Failure to properly address BC preinstallation requirements and compatibility considerations can lead to reduced operational capability and failure of BC jobs.

5. Carefully review the BC prerequisites and make sure each item has been addressed before continuing the BC host agent installation.

Note: If any of the operational considerations have not been addressed, exit the installation, address the items, and then restart the installation.

6. If all BC prerequisites have been addressed, determine the installation folder for the BC host agent software.

Installation folder considerations:

- For initial installations, choose the BC default folder or an empty host folder.
- For reinstallations, the default installation folder is `sys$sysdevice$DKCO:[SYS0.SYSCOMMOM.]`.

Note: During a reinstallation, BC overwrites the `OSVM.ini` and `SB.ini` files for the previous BC installation. To prevent losing any customized `OSVM.ini` or `SB.ini` attribute settings, HP recommends saving these files to an alternate location before reinstalling the BC software. Then, following the BC reinstallation, use these saved files to reapply the customized attribute settings to the new files, if desired.

```
=====
Choose the Installation Folder
-----

Where would you like to install Business Copy?

Default installation directory: <Node_name>$<Device_name>:[SYS0.SYSCOMMOM.]

To install BC to a different directory, exit this installation and define the
pcsi$destination logical. For example, to install in dka0:[test] use: $define/system
pcsi$destination dka0:[test].

Do you want to exit this installation to change the installation path? (Yes/No) [NO] :
Do you want to start the SWITCHBOARD service immediately after installation? (Yes/No)
[YES] :
```

Figure 16: Installation folder option

7. Press **Return** to continue using the BC default installation folder or enter `yes` to exit the installation in order to change the installation path.
8. Press **Return** to automatically start the switchboard immediately after the installation.

 After the switchboard status is determined, the BC host agent software installation begins. Initially, a progress bar is displayed, followed by an BC server platform name question.

```
=====
BC Server Platform Name
-----

NOTE: If the installation script cannot detect the entered BC server platform name or IP
address after three attempts, the installation script automatically accepts the third
entry and saves this name or IP address in the sb.ini file.

Enter the BC server platform fully qualified name, qualified name, or IP address:
```

Figure 17: BC server platform name option

9. Enter the fully qualified name, qualified name, or IP address of the BC server platform that supports this BC host agent.

Note: The BC server platform name or IP address is required to establish network communication between BC host agents and the BC server.

Note: HP recommends using the fully qualified name when entering BC server platform name information.

After entering the BC server platform name or IP address, a check is performed to verify communication. This check allows an incorrect BC server platform name to be corrected and also provides the opportunity to continue the BC host agent installation in the event that the LAN is down or the BC server platform is offline.

- If this check fails, [Figure 18](#) displays. Press **Return** to confirm the BC server platform name or IP address and continue; enter `no` to exit the installation.

```
=====
Unable to Ping Host
-----

NOTE: If a DNS Entry does not exist for this BC server platform, add the BC server
platform to the local TCP/IP hosts database:
$TCPIP SET HOST Server Name/Address=IP-Address/Alias=Server Alias

Do you want to continue? (Yes/No) [NO] :
```

Figure 18: Unable to Ping Host

- If this check succeeds, [Figure 19](#) displays. Continue with the next step.

```
=====
Pre-Installation Summary
-----

Please Review the Following Before Continuing:

Product Name:
  Business Copy EVA/MA/EMA Host Agent v2.3

Install Folder:
  <BC_default_or_previous_folder>

BC server platform:
  <BC_server_platform_name/IP>

Disk Space Information (for Installation Target):
  Required: 8416 blocks
  Available: 12340 blocks

Press return to continue:
```

Figure 19: Pre-Installation Summary

10. Press **Return** to continue; enter `quit` to exit the installation.

The installation process on the cluster impersonator node and a non-impersonator node are different.

Note: BC processes do not start when installing on a node that is not the cluster impersonator.

```

=====
Installing...
-----

WARNING: Do not terminate the installation in progress. Terminating the process may cause
an incomplete set of BC files and directories to remain on the system. During an abnormal
termination, it may not be possible to completely clean the system for BC files.

*This product does not have any configuration options.

Execution phase starting

The following product will be installed to destination:

      HP AXPVMS BC V2.3                      DISK$ALPHASYS:[VMS$COMMON.]

Portion done: 0%...10%...20%...30%...50%...60%...70%...80%...90%
%DCL-I-SUPERSEDE, previous value of BC$PATH has been superseded
This is NOT the impersonator node!
This is NOT the impersonator node!
.
.
.

```

Figure 20: Non-impersonator node installation process

```

=====
Installing...
-----

WARNING: Do not terminate the installation in progress. Terminating the process may cause
an incomplete set of BC files and directories to remain on the system. During an abnormal
termination, it may not be possible to completely clean the system for BC files.

*This product does not have any configuration options.

Execution phase starting

%DCL-I-SUPERSEDE, previous value of BC$PATH has been superseded
      IMPERSONATOR NODE

BC Open VMS HOST AGENT starting...
Starting Switchboard...
%RUN-S-PROC_ID, identification of created process is 202080BE
Broadcast Starting...
%RUN-S-PROC_ID, identification of created process is 202080BF
.
.
.

```

Figure 21: Impersonator node installation process

```

=====

Please consult the Business Copy Host Agent Release Notes before using Business Copy.
To submit comments regarding BC, send an email to BCFeedback@hp.com.

=====
...100%

```

```

The following product has been installed:

      HP AXPVMS BC v2.3                      Layered Product

```

Figure 22: BC feedback email address

The BC host agent software is installed. This new BC-enabled host can now communicate with the BC server and participate in BC jobs. Refer to the BC Host Agent Release Notes before using BC.

Completing the installation

If the BC host agent was started during installation, HP recommends browsing to the BC network and verifying that the BC host agent has been recognized. Otherwise, perform the verification after manually starting the host agent.

Completing the installation topics include:

- [Enabling cluster failover capability](#)
- [Reusing customized OSVM.ini or SB.ini settings following a BC host agent reinstallation](#)
- [Manually starting and stopping the BC host agent](#)
- [Browsing to the Business Copy network](#)
- [Verifying that the BC host agent is recognized](#)
- [System files modified during installation and removal](#)

Enabling cluster failover capability

Installing BC host agent software on a cluster does not make BC fully cluster-aware. To become fully cluster-aware, run the BC failover executable (BC_FAILOVER.EXE) on every cluster node with BC installed.

BC_FAILOVER.EXE is a watchdog program that monitors the cluster for an Impersonator Node failure. If the Impersonator Node fails, the watchdog program starts the switchboard process on the node that assumes the cluster impersonator responsibility.

Use the following command on each cluster node to start the watchdog program:

```
RUN SYS$COMMON:[SYS$STARTUP]BC_FAILOVER.EXE
```

To automatically start the BC watchdog program after a reboot, add the following lines to the sys\$manager:systartup_vms.com file:

```
$bcFail == f$search("SYS$STARTUP:BC_FAILOVER.EXE")
$If "'bcFail'" .nes. "" then
$run sys$startup:BC_FAILOVER.EXE
```

Reusing customized OSVM.ini or SB.ini settings following a BC host agent reinstallation

If an existing BC network used customized settings in the OSVM.ini or SB.ini files, these customized attributes must be reapplied following a BC host agent reinstallation.

Note: During a BC host agent reinstallation, all customized settings in the existing OSVM.ini or SB.ini files are overwritten.

To reapply the previous customized attributes, make sure to save the OSVM.ini or SB.ini files to another location before reinstalling the BC host agent. This approach allows access to the previous customized settings and, if desired, the ability to reapply the customized settings in the new OSVM.ini or SB.ini files.

Manually starting and stopping the BC host agent

Refer to the BC Network Administration Guide for the procedures to manually start or stop the processes on a BC host agent.

Browsing to the Business Copy network

To browse to the BC network, the browsing computer must have a BC-supported browser with a Java™ Runtime Environment (JRE) installed.

Refer to the BC Network Administration Guide and *HP StorageWorks Business Copy EVA/MA/EMA 2.3 Server Release Notes* (T3032–98201) for details.

Verifying that the BC host agent is recognized

To verify that a BC host agent is being recognized by the BC server platform, complete the following procedure.

Note: After installing BC host agent software in a cluster configuration, allow at least 10 minutes for the cluster to check-in with BC.

1. Browse to and log in to the BC server platform.
The BC GUI displays. Refer to the BC Network Administration Guide, if necessary to access the BC GUI.
2. Click **Help**.
3. Click **About Business Copy**.
Verify that the BC version number is 2.3.
4. Click **Resources**.
5. Review the Resources page to verify that the host is included in the host resources display.
A successful installation displays the BC host agent on this page.
6. Continue to the next host-specific BC Host Agent Installation Guide to add other BC host agents to this BC network or to update existing agents.

System files modified during installation and removal

During BC host agent installation, the following host system files are modified:

- `tcpip$etc:services.dat`
- `systartup_vms.com`

A sample entry added to the `tcpip$etc:services.dat` file includes:

```
switchboard 4991/tcp
```

A sample entry added to the `systartup_vms.com` file includes:

```
@sys$startup:REASSIGN_BC$PATH.COM
```

During the BC host agent removal process, this file is modified again to remove the BC entry added during the installation process.

Reinstalling the Business Copy Host Agent

3

Situations may arise where a change in the BC network requires a change to BC server information stored by the BC host agent. For example:

- The BC server platform is renamed or replaced.
- The BC server platform IP address changes.
- The BC server software is moved to a different BC server platform.
- A network name changes.
- A host computer is reassigned for use with a different BC server platform.

For these situations, reinstalling the BC host agent may be appropriate.



Caution: Make sure that all personnel involved with using storage systems associated with this BC environment are informed of the impending BC reinstall. If not properly planned and coordinated, reinstalling a BC host agent while the host agent is involved in running a BC job can result in reduced operational capabilities and loss of data.

Two reinstallation methods exist:

- One-step reinstallation—With this method, reinstall the BC host agent using “[Installing the Business Copy Host Agent](#)” on page 15. When prompted, allow the installation script to remove the existing host agent, and then install the BC host agent.
- Two-step reinstallation—With this method, remove the BC host agent using “[Removing the Business Copy Host Agent](#)” on page 33. Then reinstall the BC host agent using the procedure in “[Installing the Business Copy Host Agent](#)” on page 15”.

Removing the Business Copy Host Agent

4

Removing BC host agent software involves the following major steps:

1. [Coordinating removal activities](#), page 34
2. [Starting the removal](#), page 35
3. [Completing the removal](#), page 36

Coordinating removal activities

Removing a BC host agent requires coordination to make sure that the software is removed cleanly from the host.



Caution: Make sure that all personnel using storage systems associated with this BC environment are informed of the impending BC removal. Removing a BC host agent while the host agent is running a BC job can result in reduced operational capabilities and loss of data.

Ensure that:

- No BC jobs that involve the host are running or “undoing” during the removal
- No BC jobs that involve the host are scheduled to run or “undo” during the removal
- Removal activities have been coordinated with BC users and other operations

Be aware that:

- Stopping a BC host agent prevents the host computer from being recognized by the BC network
- Stopping a BC host agent prevents any jobs involving that host from running successfully

When ready, go to the next section.

Starting the removal

When completely removing BC host agent software from a standalone or cluster configurations, the host on which the removal takes place varies as follows:

- For standalone—Remove BC from the host.
- For shared system disk configurations—Remove BC from the cluster impersonator node only.
- For non-shared system disk configurations—Remove BC from all nodes of the cluster. HP recommends removing BC from the cluster impersonator node first.

BC can also be partially removed from an non-shared system disk cluster. Removing a node from this cluster configuration requires removing BC from a single node instead from the entire cluster.

Complete the following procedure to remove the BC host agent software from each node.

Note: During the removal procedure, press **Return** to choose the default response.

1. Open a terminal window and log on as a system user.
2. Enter `product remove bc` to initiate the removal script.

```
The following product has been selected:
  HP AXPVMS BC v2.3                Layered Product

Do you want to continue? [YES] :

The following product will be removed from destination:
  HP AXPVMS BC v2.3                DISK$<Node_name>: [VMS$COMMON.]
```

Figure 23: BC package removal confirmation prompt

3. Press **Return** (or enter `y`) to confirm the BC package removal; enter `n` to exit the removal script.

```
Portion done: 0%...20%...40%
[evmcl] <date_and_time>: evmcl is setting default values. Please wait.
.
.
.
...60%...70%...80%...90%...100%

The following product has been removed:
  HP AXPVMS BC v2.3                Layered Product
```

Figure 24: BC removal status

The command prompt returns when the BC host agent removal is complete.

The BC host agent is now removed from this host computer.

4. For non-shared system disk cluster configurations only, after removing BC from an individual node, restart the BC process on the impersonator node of the cluster.

Completing the removal

After the BC host agent is removed, the computer can no longer participate in BC jobs. Running any BC job that involves this computer causes the job to fail.

HP recommends planning for the disposition of each BC job that involves this computer. For example:

- Delete the job (if the job will not be valid again).
- Change the job (to eliminate all references to this host computer).
- Leave the job as is (if the job might be used again).

From a BC network perspective, a BC host agent removal is not complete until all impacted BC jobs are resolved.

glossary

This glossary defines terms that are used in this guide or are related to BC.

BC environment

A SAN environment in which Business Copy replication features are available. BC features can be available through various means, such as: storage managers, BC server and jobs, BC host agents, command line interfaces, and script files.

BC network

The portion of a SAN that consists of a BC server connected via LAN to BC-enabled host computers.

BC server platform

An SMA or SMS with BC server software installed.

See also [Storage Management Appliance](#) and [Storage Management Server](#).

host

In networked storage, a computer that can perform I/O with a storage array. In general networking, any computer on a network that provides a service.

host agent

In a client/server system, a program that performs information gathering or processes tasks on behalf of a client or server. Agents often communicate with other agents to perform a collective task on behalf of the user.

host, BC-enabled

A host computer that has BC host agent software installed. Compare to standard host.

instance

The presence of a program or set of related programs in a computer or storage system.

job (BC job)

A file created by BC that represents a user request to perform a task or series of tasks. For example, the BC job named `sales_daily_backup` might:

1. Replicate virtual disks to create BCVs.
2. Mount the BCV on a server.
3. Start the tape backup of the BCV. Jobs can be created and run from the GUI, the BC command line (EVMCL), script files, or a scheduler.

OpenView

An HP line of software products that provides storage management solutions, data protection and recovery, automatic performance tuning, storage virtualization, and other features for multivendor storage environments.

process

A program usually associated with an OpenVMS system that performs a utility (housekeeping or maintenance) function without being requested or even known by the user.

SAN

Storage Area Network. A dedicated, high-speed network of storage devices that are available to servers on a LAN or WAN. As storage devices are added to the SAN, they become accessible to the servers in the larger network.

server

A computer or program that provides a service to other computers in a client/server system. Servers often run continuously, waiting for requests from clients.

SMA

See [Storage Management Appliance](#).

SMS

See [Storage Management Server](#).

storage manager

A Web-based storage environment manager that enables a user to configure and monitor MA/EMA or EVA controllers. The HSG Element Manager resides on the Storage Management Appliance (SMA); Command View EVA resides on the BC server platform.

Storage Management Appliance

SMA. A host-independent server product designed to connect directly to the SAN fabric. The SMA provides a centralized point for managing and monitoring SAN elements, including HP switches and storage arrays. SMA software installed on the appliance provides a GUI interface for accessing the monitored SAN environment. The SMA software also provides a launch site for a variety of value-added HP OpenView applications and provides navigation links to directly manage storage components on the SAN.

Storage Management Server

SMS. Any HP supported hardware-software platform that is not connected to the SAN fabric and that does not serve as a storage host. SMS software installed on a platform provides a GUI interface for accessing the monitored SAN environment.

StorageWorks

An HP line of hardware and software storage solutions that provides storage management solutions, data protection and recovery, automatic performance tuning, storage virtualization, and other features for multivendor storage environments.

TCP/IP

Transmission Control Protocol/Internet Protocol. A suite of communications protocols used to connect host computers to the Internet.

unit (MA/EMA only)

In StorageWorks storage systems, an identifier that the controller uses when a container is mounted on a host computer. For example, the unit identifier DI could represent a RAID 0+1 striped mirror set that is mounted on a host computer. StorageWorks disk units begin with the letter D and tape units begin with the letter T.

virtual disk (EVA only)

In StorageWorks storage systems, a simulated disk that is created from physical disks in a storage array for use by hosts.

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